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OVERALL EVALUATION OF ERTS IMAGERY FOR CARTOGRAPHIC APPLICATION

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Type I Progress Report for Period September 1, 1972 - October 31, 1972

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Type I Progress Report
ERTS-A

- a. Title: Overall Evaluation of ERTS Imagery for Cartographic Evaluation

ERTS-A Proposal No.: MMC 233

- b. GSFC ID No. of P.I.: IN 014

- c. Problems:

This investigation is partly dependent on the results of experiments in thematic mapping, photomapping, map revision and Polar mapping.

These experiments are impeded by a lack of coverage of all test sites. There is also a problem in making good quality enlargements from the extremely dense 70 mm ERTS images.

- d. Accomplishments:

A complete set of precision processed images of ERTS from E-1002-18131 (Lake Tahoe) were examined and a quick look report submitted at an ERTS Seminar held at NASA/Goddard on September 29, 1972.

The first widely distributed ERTS cartographic product was produced and printed lithographically. This was a color composite covering Lake Tahoe, Calif.-Nev. It was made from 3 precision processed MSS bands and fitted with a 50 km UTM grid. A 1:500,000 scale enlargement of the Seattle area is presently being compiled from RBV bands. A meeting of the EROS Mapping Requirements Working Group to evaluate ERTS products is planned for December 1972.

e. Significant scientific results:

As a result of an examination of a set of precision processed images mentioned in item c above, the precision processor appears to be working properly and geometric quality of RBV and MSS precision and RBV bulk imagery is adequate for 1:250,000 scale while the MSS bulk is compatible to 1:1,000,000 scale at best. However, the nongeometric quality of the MSS bulk is good for 1:250,000 scale while the MSS precision is sufficient for 1:500,000 scale. The non geometric quality of the RBV bulk images is good for 1:250,000 to 1:500,000 scale while that of the RBV precision processed images is only rated fair and sufficient for 1:500,000 to 1:1,000,000 scale. Attempts to warp a grid to MSS bulk imagery and thus produce a useable cartographic product are being examined.

f. Published articles and reports:

"Cartographic Applications of ERTS Images" by Dr. Alden P. Colvocoresses presented at ACSM-ASP Fall Technical Convention, Columbus, Ohio, October 1972.

g. Recommended changes in operations: N/A

h. Changes in standing order forms: N/A

i. ERTS Image descriptive forms: NA

j. Changes in Data Request forms: N/A

k. DCP status: N/A